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Dairy Cooperatives and Their Role in the United States - 1988¹

Dairy cooperatives, or more specifically milk marketing cooperatives, are a major institution in the milk industry in the United States. Currently, 394 dairy cooperatives are marketing producer milk in the U.S., and an estimated 78 percent of all producer milk is marketed through a cooperative in which the dairy farmer is a member-owner. The other 22 percent of producer milk is marketed by independent or non-member dairy farmers. In terms of dairy farm numbers, approximately 138,000 dairy farms of the 181,000 dairy farms defined as commercial dairy farms in the U.S. at the present time have a milk marketing cooperative affiliation.

Structure of Dairy Cooperatives

Dairy cooperatives, like other farmer cooperatives, are for profit corporations which operate at cost by allocating net margins back to their producer members on a patronage basis. Dairy cooperatives are chartered by State statute in the State in which they are headquartered, and they enjoy a significant anti-trust exemption under the Copper-Volstead Act of 1922.

The structure of dairy cooperatives has reflected the same trends that have described dairy farms and processing plants in recent decades, i.e., fewer and larger. Table 1 reports these trends.

¹Robert E. Jacobson, Professor, Agricultural Economics, The Ohio State University, for presentation at Dairy Economics Forum, UDIA, Chicago, Illinois, September 14, 1988.

Table 1. Number of Dairy Cooperatives and Farm Level Share of Milk Marketed by Dairy Cooperatives, U.S., 1950-1986.

<u>Year</u>	<u>Number of Dairy Cooperatives</u>	<u>Farm Level Share of Cooperative Marketing</u>
1950-51	2,072	53 pct.
1960-61	1,609	61
1969-70	971	73
1974-75	631	75
1985-86	394	78

Even while 80 percent of the dairy cooperatives have disappeared during the 1950 through 1986 period, the share of producer milk marketed by cooperatives has increased markedly to the 78 percent level. While the 78 percent market share looks to be strong in the aggregate, there are some milk markets in the United States in which the cooperative movement is limited and the proportion of non-member producers is substantial.

Almost all of the reduction in the number of dairy cooperatives is explained by merger-consolidation activities. A rapid transition to the regional cooperative structure we see today occurred mostly in the 1965-1975 period. A cooperative such as AMPI, for example, has scores of smaller predecessor cooperatives in its genealogy. At the present time, the top 24 dairy cooperatives in the United States which are only 6 percent of the total number, market approximately 60 percent of all producer milk (see Table 2).

In some instances, cooperatives have federated or formed a federation to pursue some common marketing-pricing objectives. A federation, which is comparable in many ways to a marketing agency-in-common, is a cooperative whose membership includes individual cooperatives that maintain independent corporate status. Associated Dairymen, Inc. and Great Lakes-Southern Milk, Inc. were

Table 2. Top 24 Dairy Cooperatives in the U.S. - 1988

Rank	Cooperative	Annual Volume Billion lbs.	Member Farms Number
1.	Associated Milk Producers, Inc.	17.0	25,300
2.	Mid-America Dairymen, Inc.	7.0	11,270
3.	Dairymen, Inc.	5.7	6,500
4.	Land O'Lakes, Inc.	4.4	8,700
5.	Milk Marketing, Inc.	4.4	6,465
6.	Farmers Union Milk Marketing Cooperative	3.3	6,200
7.	Michigan Milk Producers Association	3.3	4,000
8.	Northwest Dairymen's Association	3.2	1,300
9.	Wisconsin Dairies Cooperative	2.9	5,000
10.	California Milk Producers Association	2.8	230
11.	Agri-Mark, Inc.	2.6	2,800
12.	Inter-State Milk Producers Cooperative	2.6	3,002
13.	California Cooperative Creamery	2.5	494
14.	Western Dairymen Cooperative Inc.	2.45	1,560
15.	Eastern Milk Producers Cooperative, Inc.	2.2	4,100
16.	Maryland and Virginia Milk Producers Association	2.1	1,440
17.	Dairylea Cooperative, Inc.	2.0	3,000
18.	Manitowoc Milk Producers Cooperative	1.8	2,200
19.	Alto-Golden Guernsey Dairy Cooperative	1.7	2,400
20.	San Joaquin Valley Dairymen	1.3	274
21.	Milwaukee Cooperative Milk Producers	1.2	2,000
22.	Swiss Valley Farms	1.2	3,500
23.	Upstate Milk Cooperative, Inc.	1.2	850
24.	United Dairymen of Arizona	1.1	150

early versions of federated activity. Presently, most federated activity is reflected in organizations such as CMPC in Chicago and RCMA in the Northeast which are primarily mechanisms for operating over-order price pools.

The Agricultural Cooperative Service of the USDA estimates that dairy cooperatives in the United States hold \$4.1 billion in assets. Member equity or net worth totals \$1.6 billion. Much of the \$2.5 billion in liabilities represents loans from the Banks for Cooperatives in the Farm Credit System.

Activities of Dairy Cooperatives

The 394 dairy cooperatives in the United States represent wide variations in size, marketing functions pursued and impact in the market served.² Some of the dairy cooperatives have fewer than 50 members, while a large regional cooperative like Associated Milk Producers, Inc., has over 20,000 producer members. Some cooperatives are essentially bargaining associations that maintain an office and may offer members field services, while others have extensive facilities for handling and manufacturing reserve milk processing-distributing operations. Similarly, some dairy cooperatives do not have enough control over the supply of milk for a market to have any bargaining power. Others have substantial market power and are able to implement effective and coordinated marketing-bargaining programs.

In most dairy cooperatives, the milk producer signs a membership agreement (contract) which commits the producer to marketing all milk through the cooperative and which commits the cooperative to doing various things for the

²This paragraph is adopted from Who Will Market Your Milk? by Robert Jacobson, et al., Texas Agricultural Extension Service, D-1058, March, 1978, p.15.

producer. The basic objectives or reasons for joining a dairy cooperative from a producer standpoint are:

1. To be guaranteed a market outlet and a price.
2. To have the best price terms possible bargained for in the marketplace.
3. To have milk marketed efficiently, i.e., balancing, diversion, assembly.
4. To have the highest quality producer milk possible be shipped to the market.
5. To be effectively represented in legislative, regulatory, and public relations arenas.

Financing of dairy cooperatives is generally handled on an assessment per cwt. basis from the producer milk check. The assessment, which is usually in the range of 1 percent to 2 percent of the gross blend price, covers operating expenses as well as member investment in the cooperative. The member investment portion of the assessment is generally revolved back to the member in a specified time period, usually seven to ten years.

Market Operations and Market Shares of Dairy Cooperatives

In pursuing both their market guarantee objective and their bargaining objective, the leaders in many dairy cooperatives concluded early on that cooperative owned and controlled milk plant operations would be required. Until 1950, cooperative plants in fluid milk markets engaged primarily in butter-powder processing as a means of balancing supplies in fluid milk markets. Prior to 1950, dairy cooperatives in manufactured dairy product regions such as the upper midwest had been very active in plant operations. For example, in 1936, 39 percent of the butter in the United States, 25 percent

of the natural cheese, and 17 percent of the dry milk products were manufactured at cooperative plants (but only 5 percent of fluid milk products).

In a 1984 report, the Agricultural Cooperatives Service of the USDA reported product manufacturing activity by dairy cooperatives over time.³ Market shares are reported for 1957 and 1980 in Table 3.

Table 3. Market Shares of Dairy Products Distributed by Cooperatives, 1957 and 1980, and Number of Cooperative Plants in Operation, 1980.

	Market Share		Number of Co-op Owned Plants, 1980
	1957	1980	
Butter	58 pct.	64 pct.	95 plants
Dry Milk Products	57	87	122
Cheese	18	47	174
Cottage Cheese	14	22	44
Ice Cream/Ice Milk	4	10	49
Fluid (packaged)	9 (1964)	16	123

The ACS report also indicates that in 1980, cooperatives manufactured other dairy products including (1) bulk condensed milk with a 15 percent market share, (2) condensed whey, with a 59 percent market share, and (3) dry whey, with an 81 percent market share. Approximately one-third of the total 698 plants owned by cooperatives in 1980 operated only as milk receiving stations.

Now, in 1988, best estimates are that dairy cooperatives do 15 percent of the fluid milk processing in the United States, 65 percent of butter manufacture, 55 percent of hard cheese manufacture, and 90 percent of dry milk products manufacture (see A.C. Manchester - The Public Role in the Dairy Economy, Westview Press, 1983, p. 84 for more detailed discussion of market

³Stafford, Thomas H. and Roof, James B., Marketing Operations of Dairy Cooperatives, ACS Research Report 40, ACS-USDA, July, 1984, 27 pages.

shares by cooperatives). In the past couple of years, there appears to have been some retreat from fluid milk processing by cooperatives. The sale by Michigan Milk Producers Association of their McDonald plants to a cooperative grocery chain (Country Fresh), and the effort by Dairymen to go joint venture with Borden on Dairymen's several fluid processing plants are symptoms of the retreat. Joint ventures in manufactured dairy products, particularly cheese, as illustrated by the several Leprino joint venture activities with cooperatives, have become a more significant activity in the milk industry in the past couple of years.

Dairy Cooperatives and Federal Milk Orders

The Federal milk marketing order program interfaces closely with dairy cooperatives. Federal milk orders operate in 43 fluid milk markets and regulate 80 percent of the Grade A milk in the United States. Presently, 82.8 percent of the 105,000 dairy farmers shipping milk in Federal order markets belong to one of the 218 dairy cooperatives qualified in the program.

Frequently questions arise as to what cooperatives do versus what the order does in Federal order markets. Dairy cooperatives must qualify or be certified as legitimate organizations in order to gain some privileges from the order program. These privileges include:

1. The cooperative is entitled to block vote for its members on most order provisions.
2. The cooperative is entitled to blend or pool the proceeds from the sale of member milk.
3. The cooperative may collect proceeds for its members from handlers from the sale of member milk.
4. Members of cooperatives that perform marketing services for members are exempt from market services charged non-members.

5. Cooperatives may move or direct milk in a manner not permitted proprietary handlers.

A dairy cooperative markets milk. A Federal order is only a regulation. As noted in Federal order publications contrasting the programs, "An order cannot assure that a market will be found for every producer's milk at all times. It cannot secure the most economical utilization of milk. Nor can it perform many of the other marketing functions such as procurement of supplies, economical transportation of milk, and other services which are among the normal functions of milk producers' associations."⁴

Table 3 indicates the member-non-member proportions in the Federal order by regions in the United States, and it also indicates the concentration of producers in the four largest cooperatives by region. The North Atlantic region reflected the lowest proportion of dairy farmers belonging to dairy cooperatives, 68.4 percent in December, 1986; and the West North Central region showed the highest at 91.4 percent. The four largest cooperatives marketed only 39.0 percent of producer milk in the North Atlantic region, while the West South Central region showed much more cooperative concentration with 78.3 percent of the milk in the four largest cooperatives.

Table 4 indicates that on average across the Federal order program, non-member producers ships about the same amount of milk per farm as do cooperative members. However, there is quite a bit of variation by region, especially as noted by the larger non-member operations in the two South Central regions.

⁴Questions and Answers on Federal Milk Marketing Orders, AMS-559, AMS-USDA, March 1975, p.12.

Table 4. Number of Cooperatives and Proportions of Producer Deliveries Accounted for by all Cooperatives and the Four Largest Cooperatives, by Regional Group of Federal Milk Order Markets, December, 1986.

Region 1/	Number of cooperatives 2/	Percent of producers belonging to: 3/		Percent of producer deliveries marketed by:	
		All cooperatives	Four largest cooperatives 4/	All cooperatives	Four largest cooperatives 4/
North Atlantic	87	68.4	38.0	67.3	39.0
South Atlantic	12	80.0	66.4	81.8	65.6
East North Central	47	86.6	46.9	88.2	46.7
West North Central	78	91.4	61.1	91.8	61.3
East South Central	5	80.2	79.5	75.5	74.7
West South Central	7	87.7	81.4	86.1	78.3
Mountain	8	91.0	75.1	90.3	73.4
Pacific	11	83.4	76.2	83.9	77.5
All regions combined	218	82.8	32.0	82.8	29.1

1/ See listing below for Federal milk order marketing areas included in each region.

2/ Totals are net figures in that, if a cooperative association has members marketing milk under more than one order within the region, than that cooperative association is counted only once.

3/ For some regions, these figures may be overstated since cooperative members are more likely to market their production under more than one order than are nonmembers.

4/ Figures represent the share of the four largest cooperatives operating within the region or in all markets combined.

FEDERAL MILK ORDER MARKETING AREAS GROUPED BY REGION

North Atlantic
New England
New York-New Jersey
Middle Atlantic

South Atlantic
Georgia
Alabama-W. Florida
Upper Florida
Tampa Bay
Southeastern Florida

East North Central
Michigan Upper Peninsula
Southern Michigan
E. Ohio-W. Pennsylvania
Ohio Valley
Indiana
Chicago Regional
Central Illinois
Southern Illinois
Louisville-Lex.-Evans.

West North Central
Upper Midwest
East. South Dakota
Black Hills
Iowa
Nebraska-Western Iowa
Greater Kansas City

East South Central
Tennessee Valley
Nashville
Paducah
Memphis

West South Central
Central Arkansas
Ft. Smith
Southwest Plains
Texas Panhandle
Lubbock-Plainview
Texas
Greater Louisiana
New Orleans-Mississippi

Mountain
Eastern Colorado
Western Colorado
SW. Idaho-E. Oregon
Great Basin
Lake Mead
Central Arizona
Rio Grande Valley

Pacific
Puget Sound-Inland
Oregon-Washington

Table 5. Average Milk Delivery per Producer, for Various Classifications of Producers, by Regional Group of Federal Milk Order Markets, December 1986.

Region 1/	All producers	Cooperative members 2/	Nonmembers	Members of four largest cooperatives 2/ 3/
	Pounds			
North Atlantic	69,679	68,558	72,111	71,540
South Atlantic	131,608	134,664	119,393	130,015
East North Central	60,215	61,700	53,585	60,373
West North Central	58,342	58,601	55,578	58,519
East South Central	67,158	63,195	83,212	63,106
West South Central	90,493	88,821	102,463	87,086
Mountain	226,891	225,259	243,303	221,571
Pacific	190,669	191,783	185,074	193,845
All Regions Combined:	72,733	72,767	72,568	66,066

1/ See Table 4 for Federal milk order marketing areas included in each region.

2/ For some regions, these figures may be understated since cooperative members are more likely to market their milk under more than one order than are nonmembers.

3/ Four largest cooperatives operating within the region or in all markets combined.

Non-Excludable Benefits

Dairy cooperatives, as voluntary memberships organizations, face the continuing problem of non-excludable benefits. Non-excludable benefits are programs or benefits established by a cooperative for its members and at a cost to the cooperative, but these benefits cannot be excluded from producers who are not in the cooperative. Two examples illustrate.

Historically, dairy cooperatives were very supportive of the generic advertising and promotion programs financed by dairy farmers. In many cases, cooperatives made promotion assessments mandatory on their membership. In the 1940's, 1950's, and 1960's, the American Dairy Association and the National Dairy Council drew their fundamental producer support from dairy cooperatives. By 1970, it was the dairy cooperatives that were instrumental, through cooperative leaders such as Glenn Lake, in creating the United Dairy Industry Association. But the stronger demand for milk and dairy products and higher price levels that presumably were stimulated by the various promotion-research programs benefitted all dairy farmers, not just those supporting the programs. One outgrowth of this fact, and one which has effectively resolved the non-excludable benefits problem in the promotion area, was passage of the Dairy and Tobacco Act of 1983 which mandated the 15 cent per cwt. assessment on all milk producers.

The second example concerns marketwide services. Marketwide services include activities such as transporting milk and balancing market supplies by a handler, usually a cooperative, in ways that benefit the total market but the costs of which are borne by the organization providing the service. Marketwide services therefore have historically been a part of the non-excludable benefits arena. As a result of some authorizing language in the Food Security Act of

1985, cooperatives as well as other handlers have been given license to have Federal market orders amended to have costs of such services at least partially covered out of the monthly pool. As a result, all producers who benefit pay a share of the cost. Such provisions were enacted into the Chicago Regional Order (30) in November, 1987. Many dairy cooperatives will be petitioning for such provisions in the next two or three years.

National Milk Producers Federation

Approximately sixty of the larger dairy cooperatives are affiliated in a non-profit corporation known as the National Milk Producers Federation, with offices in Arlington, Virginia. NMPF is the cornerstone of what is sometimes called the 'dairy lobby'. The main purpose of NMPF is to advance the interests of dairy farmers and their cooperatives in the United States. Primary areas of attention have included:

- dairy price supports
- import quotas
- Federal market orders
- standards of identity
- labelling
- food safety concerns
- coop anti-trust and tax issues
- other

The National Milk Producers Federation is generally recognized as having a solid record of achievement. However, the Federation has been frustrated in recent years on a couple of counts including (1) failure to get an import quota placed on casein, and (2) failure to get a longer term supply management program into place, even as the support price level was dropping. Lesser issues which have been disappointing to NMPF include the inability to raise SNF minimum standards on fluid milk products and inability to get desired

identification of substitute and imitation cheeses and of frozen pizzas using substitute and imitation cheeses.

Conclusion

The dairy cooperative movement is healthy and dairy cooperatives are in a relatively strong market position. Among major farm commodities, milk ranks first in total dollar (\$16 billion in 1985) value of products marketed by farmers through cooperatives. The \$16 billion value of milk marketed is approximately 35 percent of the \$47 billion worth of all farm commodities sold annually through one of the 3,925 agricultural marketing cooperatives in the United States. The major challenges confronting dairy cooperatives continue to be those of operating efficiently and resolving membership problems. The trends toward fewer and larger dairy farms is forcing dairy cooperatives to find new ways of treating their members equitably as compared to treating them equally. At this juncture, dairy cooperatives are meeting the test.